



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/476,372	01/03/2000	BYOUNG-CHUL SOHN	Q57096	7742
7590	02/09/2005		EXAMINER	
SUGHRUE MION ZINN MACPEAK & SEAS PLLC 2100 PENNSYLVANIA AVENUE NW WASHINGTON, DC 200373202			MEHRPOUR, NAGHMEH	
			ART UNIT	PAPER NUMBER
			2686	

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/476,372	SOHN, BYOUNG-CHUL	
	Examiner	Art Unit	
	Naghmeh Mehrpour	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 12 October 2004.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 2-6 and 8 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 2-6, 8 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 2, is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al. (US Patent Number 5,555, 266) in view of Bauchot et al. (US Patent Number 6,141,336) in further view of Fischer et al. (US Patent Number 5,889,772).**

Regarding **Claim 2**, Buchholz teaches a wireless resource allocation method in a wireless communication system including a plurality of wireless terminals and a single access point having a bridge function, the method comprising the steps of:

- a) allocating a wireless resource to a corresponding wireless terminal and receiving data from said wireless terminal in said access point (col 3 lines 64-65)
- b) performing a check to determine whether there is an error in said data which was received from said wireless terminal in said access point in the step (a) (col 3 lines 65-67).
- c) sending an error occurrence message and allocating a wireless resource for retransmission of data to said wireless terminal simultaneously when the access point detects a data error in the step (b) (col 3 lines 67, col 4 lines 1-3). Buchholz does not

show one frame comprising the down-link period and an up-link period. However Bauchot teaches that one frame comprising the down-link period and an up-link period (see figures 11, col 3 lines 10-25), in the case of error occurrence when mobile requests the base station for allocation of data transmission. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to use the above teaching of Bauchot with Buchholz, in order to minimize the deterioration in the transmission efficiency, and reduce the delay time. Buchholz modified by Bauchot fails to teach a wireless resource allocation method in a wireless communication system wherein the **step of c) allocates the wireless resources the error occurs in the received data without informing the corresponding wireless terminal of error occurrence.** However Fischer teaches a wireless resource allocation method in a wireless communication system wherein the **step of c) allocates the wireless resources the error occurs in the received data without informing the corresponding wireless terminal of error occurrence** (col 12 lines 65-67, col 13 lines 1-21). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to use the above teaching of Fischer with Buchholz modified by Bauchot, in order to minimize the deterioration in the transmission efficiency by adjusting the number of bit error rate attempts made to transmit each frame.

3. **Claims 3, 5, are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al (US Patent Number 5,555,266) and Bauchot et al. (US Patent Number 6,141,336) in view of**

Fischer et al. (US Patent Number 5,889,772), and in the further view of Johnston (US Patent Number 6,064,649).

Regarding **Claim 3**, Buchholz fails to teach a wireless resource allocation method wherein said downlink period comprises a broadcast period, and a download reservation period. However Bauchot further teaches a wireless resource allocation method wherein said downlink period comprises a broadcast period, and a download reservation period (See figure 11, col 4 lines 37-49, col 5 lines 15-30). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Bauchot with Buchholz, in order to overcoming a delay-oriented scheduling system by using the arrival time of the data cells for determining a deadline of each cell before which the cell has to be transmitted in order to meet a required quality of service.

Buchholz modified by Bauchot and Fischer fails to teach a wireless resource allocation method wherein said downlink period comprises a preamble for synchronization. However Johnston teaches a wireless resource allocation method wherein said downlink period comprises a preamble for synchronization (col 3 lines 29-39). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Johnston with Buchholz modified by Bauchot and Fischer, in order to reduce transmission delay and to prevent decreasing an actual data transmission rate.

Regarding **Claim 5**, Buchholz fails to show that a wireless resource allocation method wherein during said down-link period, said access point transmits a broadcast message and various control information. However Bauchot teaches a wireless resource allocation method wherein

during said down-link period, said access point transmits a broadcast message and various control information (See figure 11, col 4 lines 37-49, col 5 lines 15-30). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Bauchot with Buchholz, in order to overcoming a delay-oriented scheduling system by using the arrival time of the data cells for determining a deadline of each cell before which the cell has to be transmitted in order to meet a required quality of service.

4. **Claim 4**, is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al (US Patent Number 5,898,679), and Bauchot et al. (US Patent Number 6,141,336) in view of Fischer et al. (US Patent Number 5,889,772) in the further view of Patel (US Patent Number 5,953,706).

Regarding **claim 4**, Buchholz modified Bauchot and Fischer fails to teach a wireless resource allocation method wherein the up-link period comprises a contention period and an upload preservation period. However Patel teach a wireless resource allocation method wherein the up-link period comprises a contention period and an upload preservation period (col 3 lines 59-65- col 4 lines 1-10). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Patel with Buchholz modified by Bauchot and Fischer, in order to provide a system with less error by reducing the stages where data is manually relayed and transcribed by various service providers.

5. **Claim 6**, is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al (US Patent Number 5,555,266) and Bauchot et al. (US Patent Number 6,141,336) and Fischer et al. (US Patent Number 5,889,772), in view of Johnston (US Patent Number 6,064,649) in the further view of Patel (US Patent Number 5,953,706).

Regarding **claim 6**, the combination of Buchholz, Bauchot, Fischer and Johnston fails a wireless resource allocation method wherein various control information includes not acknowledge information the wireless terminal transmitted to the access point during the upload reservation period of a previous frame. However Patel teaches a wireless resource allocation method wherein an acknowledge information or not acknowledge information the wireless terminal transmitted to the access point during the upload reservation period of a previous frame (col 6 lines 35-51). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Patel with Buchholz, Bauchot and Fischer modified by Johnston, by centrally control network reduce the cost of the telephone communication, and provide more availability of services to users, because not every service provider will have a relationship with a counterpart service provider in every other city.

6. **Claim 8**, is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al. (US Patent Number 5,555,266) in view of Fischer et al (US Patent Number 5,889,772).
Regarding **Claim 8**, Buchholz teaches a wireless resource allocation method in a wireless communication system including a plurality of wireless terminals and a single access point having a bridge function, the method comprising the steps of:

a) allocating a wireless resource to a corresponding wireless terminal and receiving data from said wireless terminal in said access point (col 3 lines 64-65)

b) performing a check to determine whether there is an error in said data which was received from said wireless terminal in said access point in the step (a) (col 3 lines 65-67).

c) sending an error occurrence message and allocating a wireless resource for retransmission of data to said wireless terminal simultaneously when the access point detects a data error in the step (b) (col 3 lines 67, col 4 lines 1-3). Buchholz fails to teach a wireless resource allocation method in a wireless communication system wherein the step of c) allocates the wireless resources the error occurs in the received data without informing the corresponding wireless terminal of error occurrence. However, Fischer teaches a wireless resource allocation method in a wireless communication system wherein the step of c) allocates the wireless resources the error occurs in the received data without informing the corresponding wireless terminal of error occurrence (col 12 lines 65-67, col 13 lines 1-22). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to use the above teaching of Fischer with Buchholz, in order to minimize the deterioration in the transmission efficiency by adjusting the number of bit error rate attempts made to transmit each frame.

Response to Arguments

7. Applicant's arguments filed on 10/24/04 have been fully considered and are persuasive. Therefore, on Fischer col 13 lines 12-22 has been added to the rejection of claims 1, 8.

Conclusion

8. **Any responses to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications indented for entry)

Or:

(703) 308-6306, (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II. 2121 Crystal
Drive, Arlington, Va., sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the technology Center 2600 Customer Service Office whose telephone
number is (703) 306-0377.

Any inquiry concerning this communication or earlier communication from the examiner
should be directed to Melody Mehrpour whose telephone number is (703) 308-7159. The
examiner can normally be reached on Monday through Thursday (first week of bi-week) and
Monday through Friday (second week of bi-week) from 6:30 a.m. to 5:00 p.m.

If attempt to reach the examiner are unsuccessful the examiner's supervisor, Marsha
Banks-Harold be reached (703)305-4379.

NM

February 6, 2005


MELODY MEHRPOUR
PATENT EXAMINER